

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. § 119, which papers have been placed of record in the file.

IDS

2. Receipt is acknowledged of the information disclosure statement received 8-24-95, which information has been considered as to the merits and entered into the file. See the attached form PTO-1449 (1 sheet).

Drawings

3. This application has been filed with informal drawings which are acceptable for examination purposes only. Formal drawings will be required when the application is allowed. See the attached form PTO-948 for objections by the Draftsperson.

Specification

4. Applicant is reminded of the proper language and format of an Abstract of the Disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 250 words. It is important that the abstract not exceed 250 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said", should be avoided. The abstract should describe the disclosure sufficiently to assist readers in

deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

Specifically, the use of claim language such as "comprising" and "means" is objectionable. Correction is required.

5. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

6. A substitute specification in proper idiomatic English and in compliance with 37 C.F.R. § 1.52 (a and b) is required. The substitute specification filed must be accompanied by a statement that it contains no new matter. Such statement must be a verified statement if made by a person not registered to practice before the Office.

7. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed. A title that indicates the modular nature of the invention is suggested.

112 Rejection

8. Claims 1-5 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 line 11, "an image data" lacks clear antecedent basis since it is not clear if this is meant to refer to the "image data" previously recited at line 6;

lines 13-14, "image data and various types of control data" lacks clear antecedent basis since it is not clear if this is meant to refer to the "image data and various types of control data" previously recited at lines 6-7;

lines 19-20, "image data and various types of control data" lacks clear antecedent basis since it is not clear if this is meant to refer to the "image data and various types of control data" previously recited at lines 6-7 or lines 13-14.

Claim 2 line 2, "a frame" has improper antecedent basis since a "frame" is previously recited at claim 1 line 18;

line 3, "a frame" has improper antecedent basis since a "frame" is previously recited at claim 1 line 3.

Claim 3 line 2, "fr" is indefinite and should be --for--;

line 2, "a frame" has improper antecedent basis since a "frame" is previously recited at claim 1 line 3.

Claim 4 line 3, "a frame" has improper antecedent basis since a "frame" is previously recited at claim 1 line 3;

line 4, "a frame" has improper antecedent basis since a "frame" is previously recited at claim 1 line 10.

9. Claims 1-5 are rejected under 35 U.S.C. § 112, second paragraph, as being incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections. MPEP § 706.03(f).

Specifically, in claim 1 it is not clear how the first, second, and third data I/O means are interrelated or interconnected.

It is also not clear from recitation of claim 1 how the first and second signal generating means operate in connection with the rest of the elements of the claim.

102 Rejection

10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

*A person shall be entitled to a patent unless --
(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.*

11. Claim 1 is rejected under 35 U.S.C. § 102(B) as being anticipated by Shimizu (USPN 4,691,237).

Shimizu discloses all of the recited features of claim 1 of a copying system (figures 1, 2, 4, and 5) comprising a scanner module (A), a printer module (B), and a system control module (C) designed as independent units with separate frames including interface means (JR, JC, and JP).

103 Rejections

12. The following is a quotation of 35 U.S.C. § 103 which forms the basis for all obviousness rejections set forth in this Office action:

A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Subject matter developed by another person, which qualifies as prior art only under subsection (f) or (g) of section 102 of this title, shall not preclude patentability under this section where the subject matter and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person.

13. Claims 2-4 are rejected under 35 U.S.C. § 103 as being unpatentable over Shimizu (USPN 4,691,237) in view of Hiroki et al. (USPN 4,962,430).

Shimizu discloses all of the recited features of claim 1 of a copying system as given in the 102 rejection above, except for a system control module frame formed monolithically with a

scanner module or printer module frame (claim 2), a coupling means fixing a printer module frame and a scanner module frame (claim 3), or a first power supply in a scanner module frame and a second power supply in a printer module frame (claim 4).

However, Hiroki et al. disclose all of these features. Hiroki et al. disclose a copy machine system (figures 1, 2, and 10) having a system control module frame formed monolithically with a scanner module or printer module frame (figures 1 and 2), a coupling means fixing a printer module frame and a scanner module frame (figures 1 and 2 and accompanying text), or a first power supply (58) in a scanner module frame and a second power supply (80) in a printer module frame (figures 10A, 10B, and 11 and accompanying text).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the copying system disclosed by Shimizu with the copying system features as taught by Hiroki et al.. The rationale would be to improve operability as taught by Hiroki et al. at column 1 lines 39-49 and to allow easier adaptability of the system to different types of output devices as taught by Shimizu.

14. Claim 5 is rejected under 35 U.S.C. § 103 as being unpatentable over Shimizu (USPN 4,691,237) in view of Hiroki et al. (USPN 4,962,430) as applied to claim 1 above, and further in view of DE 35-22-907 A1 or the leaflet by Siemens from 1987.

Shimizu as modified by Hiroki et al. disclose all of the recited features of claim 1 of a copying system as given in the 102 rejection above including data transmission/reception by arraying means (figure 11) and data I/O between the several modules in a state where the modules are arrayed by the arraying means through a space for data transmission and by means of electrical signals (figures 10A, 10B, and accompanying text), except for transmitting/receiving data with an arraying means and for data I/O by means of light, electric waves, or supersonic waves through space.

However, DE 33-37-682 C2 discloses data transmission by using light (figures 1, 5A, 5B, 6A, 6B, and accompanying text), and Chadima, Jr. et al. disclose an optical coupler which transmits data in light waves (columns 6 and claim 41).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to implement optical couplers or light/wave transmission of data as taught by any of the above secondary references in combination with the copy machine system having array means and interface and I/O means as taught by Shimizu as modified by Hiroki et al. since all of the references applied relate to copy machine systems with connections between plural modules. The rationale would be to reduce noise and improve security of data transmission between modules as recognized in the art, and to further provide a low cost printer adapter which can adapt a printer to plural printer

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units and which adds only minimally to the cost and weight of a basic printer unit as taught by Chadima, Jr. et al. at column 1 line 58 to column 2 line 27.

Conclusions

15. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Chikano (USPN 5,087,932) discloses power supplies for a copy machine system.

Shimizu et al. (USPN 5,001,574) disclose a copy machine system (figures 1, 3, 4, and 6) substantially as recited by applicants in claim 1.

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16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eric Frahm whose telephone number is (703) 308-1317.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-1782.



Eric Frahm
Patent Examiner, Art Unit 2111

EF
March 12, 1996